Rhodora

JOURNAL OF THE

NEW ENGLAND BOTANICAL CLUB.

Conducted and published for the Club, by

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Vol. 16. March, 1914. No. 183.

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Boston, Mass.
1052 Exchange Building.

Providence, R. I.
Preston and Rounds Co.

RHODORA.—A monthly journal of botany, devoted primarily to the flora of New England. Price ***$1.50*** per year (domestic and foreign); single copies 15 cents. Prices of Volumes 1 and 2 (1899 and 1900) on application. All remittances by check or draft, except on Boston or New York, must include ten cents additional for cost of collection. Notes and short scientific papers, relating directly or indirectly to the plants of the northeastern states, will be gladly received and published to the extent that the limited space of the journal permits. Forms will be closed five weeks in advance of publication. Authors (of more than one page of print) will receive 25 copies of the issue in which their contributions appear. Extracted reprints, if ordered in advance, will be furnished at cost.

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Subscriptions, advertisements, and business communications to
W. P. RICH, 300 Massachusetts Avenue, Boston, Mass.

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THE NEW ENGLAND BOTANICAL CLUB

Vol. 16. March, 1914. No. 183.

SOME FLESHY FUNGI OF STOW, MASSACHUSETTS,— II.

Simon Davis.

Since my former article[1] I have diligently followed my favorite pursuit and herein give some further results of my work. Much to my regret no less than four tracts of woodland that I have searched for twelve years past have been laid low by the owners thereof. The only tamarack swamp in the town was stripped of every tree during the winter of 1911–1912. I cannot help a feeling of regret as I recall my collections therein in days gone by of rare species of the series Hyporhodii.

Meteorological conditions have not improved until this fall of 1913. Between June 8 and September 1 of this year, less than .2 inch of rain fell in Stow. All summer crops either failed or gave the farmer a mere pittance for his expenditures of time and money. During September however rains were frequent and the precipitation nearly up to the monthly average and in October the rainfall was above the normal with consequences that made the heart of the toadstool collector leap with joyous expectancy. I have not seen so many nor such a variety of fungi in our woods since the fall of 1907.

As usual I began my search May first of each of the years 1911, 1912, 1913, and found many morels, especially during last May. It may be interesting to know that I find them frequently under the white ash. Best of all during May, 1912, I gathered two plants of *Gyromitra esculenta* Fr., not a common plant. I have found it just twice in twelve years. Dr. W. W. Ford of Johns Hopkins Medical School pronounced a portion of one of my plants non-poisonous.

[1] Rhodora, Vol. 13, pp. 57–66.

They were found in the middle of a road leading through pines. For the last three years I have found in a small swamp during May and June many plants of an interesting whitish Ascomycete, *Ombrophila clava* (A. & S.) Cooke. Its shape reminds me of a small copper rivet and I find it on dead leaves, often nearly or quite covered with water. The plant was identified by Prof. E. J. Durand.

I find during May and June a rare species of *Pholiota, P. mycenoides* Fr. It grows in sphagnum in company with *Galera sphagnorum* Pers. The stem is very long, slender, and brittle, and in my experience attached to the moss. It requires delicate handling if you wish to collect an entire plant.

I have found in four different places for years an occasional specimen of *Hypholoma rugocephalum* Atk. and many specimens of *H. delineatum Pk.* Both occur on decayed wood and resemble each other externally, but the latter may be separated from the former by its more narrow obtuse and smooth spores and by its broader flask-shaped cystidia. Dr. Peck notes the differences in N. Y. State Mus. Bull. No. 150, p. 83. Any collector who wishes to know the exact meaning of the word "rugose" cannot do better than to inspect very carefully the pileus of one of these fungi.

I continue to find yearly a few plants of *Pluteolus callistus* and *P. expansus* Pk. They are rare plants and when in good condition as beautiful as they are rare. Dr. Peck in his synopsis, N. Y. State Rep. No. 46, p. 59, bases his distinction between these two species upon habit, not a good distinction in my opinion and experience. This past summer I found two specimens of *P. expansus* growing on a decayed maple twig in an exsiccated water hole in a swamp. The spores of the two species are substantially alike.

During June and the early part of July I find quite a number of specimens of *Marasmius varicosus* Fr. Morgan does not include this species in his list of the North American Species of *Marasmius.*[1] Dr. Peck apparently has never seen the plant, for I fail to find any reference to it in his reports. The purplish-brown gills growing darker as they dry, and the stem covered with blackish-red down half way up are the chief characteristics of this remarkable species. August 7, 1911, I found many plants of *Lepiota cristatella* Pk., see N. Y. State Rep. No. 31, p. 31 and No. 35, p. 163. This plant bears a strong

[1] Journal of Mycology, V. 12.

external resemblance to almost all white *Mycenae* and is very rare; Peck says in the latter report: "The species has been detected but once." I found it in a tamarack swamp.

Both Dr. Peck and I were greatly puzzled to name the genus to which a plant belonged that I found first in 1910 growing upon and around a pile of decayed white birch. It had many of the characteristics of a *Collybia;* it looked like a *Mycena;* also bore some resemblance to an *Omphalia.* The doctor wrote January 11, 1911: "It hovers on the confines of *Collybia, Mycena* and *Omphalia,* and I think better be left till we can settle at least the genus." Finally he placed it in the genus *Omphalia* as *O. maura* Fr. I am not quite reconciled to this determination, having a strong predilection in favor of considering it a species of *Collybia.* It is a small plant variable in color and structure from water white to fuliginous and deeply umbilicate to even; it is without odor and of no pronounced taste.

September 16, 1913 I found very fine plants of what I consider *Armillaria ponderosa* Pk. It is a very noticeable plant because of the veil becoming lacerated and adhering in shreds to the stem and margin of the pileus. My plants were very light yellowish. See N. Y. State Mus. Rep. 43, p. 41.

Eccilia flavida Pk. was very common during 1912 and 1913. It varies very much in stature and color. It is smooth and slimy, and when seen after the gills have assumed the prevailing color of the genus presents a very pretty sight. The pileus is pale yellow, obscurely striate when dry and the stem is concolorous. I find it in swamps under deciduous trees, usually in great abundance.

August 4, 1913, I found two plants of one of the most interesting *Ecciliae* I have ever seen. Its especial claim to distinction lies in the peculiarity of the gills which are brownish-fimbriate and serrulate. I cannot find any species of *Eccilia* that agrees with my plant.

August 4–12, 1911, I found many plants of *Nolanea delicatula* Pk. It is well named, for it is delicate in appearance and must be handled with the utmost care if you wish to preserve it for future reference and comparison. It is entirely white and found in thickly wooded swamps. See N. Y. State Mus. Rep. 24, p. 66.

August 25–Sept. 6, 1913, I found many plants of what I believe to be a new species of *Nolanea.* It was growing upon decayed leaves in a swamp of deciduous trees in an exsiccated water hole. I made three collections; the last time I picked it from under the leaves, and was

enabled thereby to fix the genus as the margin was straight and from the first pressed to the stem, and not involute. A slight idea of its color may be had when I write that it reminded me of and I took it for *Hygrophorus psittacinus* Fr., because of its greenish color and shining appearance. But the plant is not a particle viscid, and its seemingly viscid character is wholly due to the fibrils of the pileus which appear as if glued to its surface resembling in this respect *Inocybe agglutinata* Pk. with which I have been familiar for ten years. The pileus is olive green with whitish streaks and the stem and gills are white. It is a pretty and very interesting species, and I am fortunate in having a good collection of specimens. September 7, 1911, I found a number of plants of a pink-spored Agaric that puzzled me. I thought it a species of *Leptonia*. But Dr. Peck pronounced it a new species and named it *Clitopilus leptonia*. See N. Y. State Mus. Bull. No. 167, p. 39. In Dr. Peck's letter to me he writes: "In some of the specimens the lamellae are distinctly decurrent. This species is allied to *Clitopilus vilis* Fr. and *C. subvilis* Pk., though resembling a *Leptonia*." I found it again in 1912, but it did not appear in 1913. *Naucoria sphagnophila* Pk. is very common in one swamp, where it grows throughout the summer. The mature plant is noted for its minutely appressed tomentose and sometimes flocculose squamulose pileus of a grayish ochraceous or rusty brown color. It is a small plant the pileus seldom exceeding 2.5 cm. in breadth.

During November, 1912, I found in thick pine woods a pretty *Collybia* which Dr. Peck called new and named *C. truncata* because of its truncate pileus. It looks not unlike an *Entoloma* in situ and the reddish spots on the gills as they mature heighten the illusion; it has a long, reddish, creeping stem. In the same month I found another new *Collybia* called by Dr. Peck *C. subdecumbens*. The stem was in many plants up to 16.5 cm. long, straight above the oak leaves upon which the plants grew, but bent at a right angle where it penetrated the leaves, compressed in many plants and well covered with a white, hairy mycelium; many stems flatten out upon the leaves to which they are attached. The taste and odor remind one of a raw potato. The pileus is drab, the gills white, and the upper part of the stem satin white and shining. The entire plant presents with age a slightly scorched appearance. The last two species were found after severe frosts had visited Stow. For full descriptions see Mycologia for March, 1913, Vol. V, No. 2, p. 68.

In November, 1911, I found numerous and fine specimens of *Cortinarius pholideus* Fr. With my determination Dr. Kauffman our American specialist on this genus, agreed. It has not appeared since. I found it on high land under pines. It is distinctive because of its fawn colored pileus, which with the stem is squarrose with fuliginous-blackish scales. In the same piece of woods I found in October last fine plants of *C. duracinus* Fr. as they seemed to me. Upon sending them to Dr. Kauffman he reported, "The *Cortinarius duracinus* Fr. may be correct. I still have uncertainities as to what the genuine one is. In any case it agrees better with the Friesian species than the variety of it which occurs here (as well as in Sweden)." This opinion exhibits the professor's good judgment and careful study of this intricate genus. I consider this species remarkable because no trace of a fibrillose cortina has been observed in any stage of its growth. Such cortina as it has appears only as a silky narrow white zone around the very margin of the pileus. See Stevenson, British Fungi, Vol. 2, p. 54.

In October 1911, *Hygrophorus morrisii* Pk. was very common and very variable in size. I find it always under pines. It bears a very strong resemblance to *H. pustulatus* Fr., as noted by Dr. Peck, but is distinguished by the characters named by him. See Bull. Torrey Botanical Club, Vol. 26, p. 64. 1899. It was not seen during 1912 and 1913. In the summer of 1912, I found many specimens, very large and very small, very light and very dark, of *Hyrophorus nitratus* Fr. I found it by the roadside out of the shade, in the depths of a swamp entirely in the shade, and in situations where the sun reached it for a few hours of each day. The strong nitrous odor was always present. "Very changeable in stature according to locality," remarks Stevenson, Vol. 2, p. 91. During August of 1912 and 1913, I found a few specimens of *Hygrophorus peckianus* Howe, a curious plant on account of its change of color; when young and moist it is almost exactly the color of *Lactarius fuliginosus* Fr.; when dry and *passé* it is avellaneous and opaque. It recalls small faded specimens of *Laccaria laccata*. I have never detected any odor such as Howe noticed.

Of all agarics I have ever found the vilest in smell was one I collected in August, 1912, in a swamp and under a very large white oak. I consider it was *Clitocybe amara* Fr. or very near that species. The taste was very bitter and the odor disgusting and persisting for two days but fortunately it was not volatile. I regret that I have but one

specimen. *Clitocybe subnigricans* Pk. grew near the preceding plant. It is a plant that always suggests one of the *Tricholomata* as I look down upon it, but as Dr. Peck says in N. Y. State Mus. Bull. 150, p. 2, "A fine species easily distinguished by its strong odor and the blackening of the lamellae and stem where bruised and in drying."

Many of the common species of *Clavaria* are met with each season but I will mention only a few that are not common. *Clavaria similis* Pk. and *C. kromholzii* Fr. were found in August, 1911, in a swamp. In the fall of 1912, I found a plant conspicuous for its size and color which Dr. Peck determined as *C. obtusissima* Pk., N. Y. State Mus. Bull. No. 167, p. 39. *C. pallescens* Pk. I continue to find and this past season's collection developed a strong smell of sulphuric ether upon drying.

Many of the common species of the *Tricholomata* were abundant in October last. I refer in particular to *T. terreum* Schaeff., *T. equestre* L. and *T. portentosum* Fr. Of less common species I found in 1911, *T. fumidellum* Pk., *T. albobrunneum* Pers., *T. flavobrunneum* Fr. and *T. terraeolens majus* Pk. in thick pine woods on high land. This last plant I have reason to think is of wide range. It is a variety of *T. terraeolens* Pk., and is noted in N. Y. State Bull. 157, p. 52. It is a handsome plant.

Stow seems to me highly favored with genera and species of the *Hyporhodii* and *Dermini*. I find and collect more plants of these two series than of all the remaining series. In September, 1911, I found many specimens of *Entoloma flavifolium* Pk. They were much larger than Dr. Peck's illustration in N. Y. State Mus. Bull. 105, pl. S., deeper in color and the stem distorted in shape. September 13, 1911, I found fine plants of what Dr. Peck determined as *Entoloma fumosonigrum* Pk. The pileus has the color of *Lactarius lignyotus* Fr. It appeared in the same locus August 21, 1912, three weeks earlier than in 1911, but it did not appear in 1913; see N. Y. State Mus. Bull. 167, p. 42. August 27, 1912, I found a very distinguished, tense looking *Entoloma* which Dr. Peck determined as *E. mirabile* Pk. It is colored like *E. peckianum* Burt., but is stouter and larger. It did not appear in 1913. The season of 1913 brought to my notice in considerable quantity a marked variety of *E. salmoneum* Pk. I found about forty plants with a light greenish stem more highly colored at the base than at the top and many of them with pilei having greenish shades more or less deep. In all other respects they were typical plants. Each

season I find a few plants of *Leptonia flavobrunnea* Pk. originally found in Stow by the writer in 1908. The specific name fits this species admirably, for the gills are yellowish-brown. August 4–30, 1913, I found numerous specimens of a small *Leptonia* finally determined by Dr. Peck as *L. gracilipes* Pk. It grew very abundantly in and upon each side of a road leading through a large tract of mixed woods. The same month I found in swamp woods a number of plants of a species of *Leptonia* finally determined to be *L. validipes* Pk. It is a very straight, shining, steel-blue plant and grew upon and at the base of a pile of vegetable humus. It is a small but very handsome plant; for descriptions of the last two species see Mycologia, Vol. V., No. 2, pp. 69, 70.

Hebeloma discomorbidum Pk. was quite common during the fall of 1911. "In the dried specimens the center of the pileus has a brown or discolored appearance, as if beginning to decay. This is suggestive of the specific name." See N. Y. State Mus. Bull. 139, p. 75.

The genus *Inocybe* I must admit at once has a fascination for me only exceeded by the genus *Hygrophorus*. The species of the latter genus with few exceptions have been conspicuously absent from all my collecting grounds since 1908. On the contrary the species of *Inocybe* have loomed large for the past three years and I have tried to learn something about them from field observations, from my books, and under the guidance of Dr. Peck. At the outset let me say: "Unless you have and know how to use a microscope, drop this genus." You cannot do anything with the numerous species unless you resort to a microscope to learn the nature of the spores and the presence or absence of cystidia. Even then you will be face to face with many an obstacle that will try your patience. Herein I shall record little more than an enumeration of my collections. During the past three years I have found and collected *I. infelix* Pk., *umboninota* Pk., *hiulca* Fr., *diminuta* Pk., *asterospora* Quél., *trechispora* (Berk.) Karst., *castaneoides* Pk., *agglutinata* Pk., *rimosoides* Pk., *subochracea* (Pk.) Mass., *calospora* Quél., *cutheloides* Pk., *minima* Pk., *longispora* Pk., and *cuthelella* Pk.

Unless otherwise stated all identifications of species mentioned were made by my good and very accommodating friend Dr. Charles Horton Peck, State Botanist, of Albany, N. Y., and such plants are in the N. Y. State Herbarium in said Albany. Many specimens also are in my possession, for I try diligently to find enough for correspondents

and myself, usually though not always succeeding. I think it a good plan to pick a solitary specimen if one deems it of sufficient interest to save while waiting for more. I make as good description as possible and then am the better prepared to recognize the plant upon a second meeting.

Brookline, Massachusetts.

ALLIES OF SOLIDAGO ODORA.

Albert Hanford Moore.

In 1881 Gray described a new species of Solidago, *S. Chapmanii*,[1] which had been confused with *S. odora* Ait.[2] The latter species was known to Plukenet and clearly illustrated in his works.[3] Michaux[4] distinguished an *S. retrorsa*, which is plainly a synonym of it, but his *S. odora*,[5] is generally considered an equivalent of *S. tortifolia* Ell.,[6] and perhaps correctly. It is certainly not *S. odora* Ait., nor any of the other species included in the key below. *S. lanceolata* Bosc[7] is nothing but a mechanical synonym. *S. odora* can be told from all its allies by the longer and strictly lanceolate or linear-lanceolate, usually thinner leaves.

The only other near relatives of *S. odora*, hitherto recognized, are *S. tortifolia* and *S. fistulosa* Mill.[8] In the former the lower leaves are distantly serrate, the involucres smaller (3.5–4 mm. high, about 2 mm. broad), and their scales very blunt and erose, which is true in no other species of the group. The leaves of *S. fistulosa* are crenate-serrate, with more or less numerous scattered hairs on the lower surface, while in *S. odora* and *S. Chapmanii* the leaves are entire and glabrous, except for the scabrous margin. In *S. tortifolia* they are ciliate and with scabrous midrib.

[1] Proc. Am. Acad. Arts & Sci. xvi, 80 (1881).
[2] Hort. Kew. ed. 1, iii, 214 (1789).
[3] Alm. Bot. Phyt. (Omn. op. iv) 389 (1696); Phyt. sive Stirp. Ill. minus Cogn. Ic. Tab. Aen. (Omn. op. i) t. 116, f. 6 (1691).
[4] Fl. Bor.-Am. ii, 117 (1803).
[5] Michx. l. c. 118.
[6] Sketch Bot. S.-C. & Ga. ii, 377 (1824).
[7] DC. Prod. Syst. Nat. Regn. Veg. 334 (1886).
[8] Gard. Dict. ed. 8, no. 19 (1768).

To the species already enumerated is now to be added a new one, as distinct as *S. fistulosa* or *S. tortifolia*, and if anything more so than *S. Chapmanii*. Most striking in this new species are the very long, ascending branches of the inflorescence, usually arising from nearly the same point on the stem and gracefully curved, producing in a typical inflorescence an effect altogether unlike that of any other inflorescence in the genus Solidago, in shape suggesting an ordinary feather-duster or the familiar European besom, or broom made of fagots (the *scopae* of the Romans), if one may use such homely similes.

This very distinct species was first observed by Mr. S. C. Hood in the vicinity of Orange City, Florida. Mr. Ivar T. Tidestrom kindly referred to me for study specimens of it which he collected there.

KEY TO THE ALLIES OF S. ODORA AND S. CHAPMANII.

a. Leaves, or at least the upper ones, entire, glabrous except for the scabrous margins, or with scabrous midrib. b.
  b. Leaves all entire, not clearly differentiated into upper and lower cauline; involucral scales not with rounded nor erose apex, generally acute. c.
    c. Stems scabrous, with minute hairs only; leaves with glabrous midrib, more or less prolonged beyond the apex, usually anise-scented, but sometimes odorless; branches of the inflorescence relatively short, not with a long portion below the flowers. d.
      d. Leaves all long lanceolate or linear-lanceolate, acuminate. *S. odora.*
      d. Leaves some or all of them oblong or elliptic-ovate, more often obtuse, at least not acuminate, and strongly inclined to be thick and rigid.[1] *S. Chapmanii.*
    c. Stems very rough, with short but conspicuous bristly hairs; leaves with scabrous midrib, rounded and hardened at the tip but not prolonged, and with a characteristic goldenrod odor; branches of the inflorescence elongate (averaging 2.3–3 dm. in length), ascending, with a long portion below the flowers. *S. aspericaulis.*
  b. Lower leaves remotely serrate, distinguished into upper and lower, often rather abruptly; involucral scales with rounded and erose apex. *S. tortifolia.*
a. Leaves all minutely crenate-serrate, generally with scabrous hairs scattered over lower surface, gradually decreasing in size from base to summit. *S. fistulosa.*

SOLIDAGO ODORA Ait. Hort. Kew. ed. 1, iii, 214 (1789).

Virga aurea Americana Tarraconis facie & sapore, panicula speciosissima Pluk. Alm. Bot. Phyt. (Omn. op. iv) 389 (1696); Phyt. sive Stirp. Ill. minus Cogn. Ic. Tab. Aen. (Omn. op. i) t. 116, f. 6 (1691).

S. retrorsa Michx. Fl. Bor.-Am. ii, 117 (1803); Ell. Sketch Bot. S.-C. & Ga. ii, 377 (1824).

S. lanceolata Bosc ex DC. Prod. Syst. Nat. Regn. Veg. 334 (1886).

[1] Rigidity is also characteristic of the leaves of *S. aspericaulis.*

Solidago Chapmanii Gray, Proc. Am. Acad. Arts & Sci. xvi, 80 (1881).

S. odora Chapm., in part, Fl. So. U. S. ed. 1, 213 (1860).

Solidago **aspericaulis** A. H. Moore, spec. nov.

Caulibus inflorescentiae ramisque asperrimis, numerosissimis pilis horridis instructis; foliis 2–4.3 cm. longis 0.7–1.3 cm. latis (in inflorescentiae ramis infra axem verum numerosis 1–1.3 cm. longis 3.6 mm. latis), odore maximarum huius generis specierum proprio, sessilibus vel subamplexicaulibus et auriculatis aut subcordatis ovatolanceolatis, apice duro obtuso non nervo medio prolongato, ciliatis, marginibus scaberrimis paucissimis dentibus rotundatis duris inconspicuis praeditis, nervo medio scabro; inflorescentiae ramis crassis longis subaequalibus subfasciculatis plerisque valde et venuste curvatis longitudine tota 1.3–3 (plerumque 2.3–3) dm., longitudine infra flores plerumque ca. 1.4 dm. (Tota inflorescentiae altitudo ca. 1.2–3 dm., maxima latitudo 2.5–3 dm.); involucris 5–5.5 mm. altis ca. 2.5–3 mm. latis numerosis secundis; involucri squamis linearibus plerumque acutis glabris dorso rotundato non carinato; achaeniis minute pubescentibus.

Type specimen: Florida, Volusia County, Orange City, Oct. 12, 1913 (*Ivar T. Tidestrom*, no. 7051, in Herb. Tidestrom. Co-types in Herbb. Riks Mus., Gray, U. S. Nat. Mus., and Moore).

The branches of the inflorescence in *S. aspericaulis* are stouter and longer than in either *S. Chapmanii* or *S. odora*, as well as being more characteristically aggregated in subfasciculate manner. From these two species it differs also in the greater roughness of the stems (the larger grayish, instead of more frequently brownish or yellowish hairs in correspondence to their size, appearing more noticeably transverse banded under a lens of moderate power), and in the typical and strong goldenrod odor, instead of the anise scent usual in the two species named.[1] The involucral scales in *S. odora* are distinctly keeled, in *S. Chapmanii* less noticeably, and in *S. aspericaulis* and the other species not at all. From *S. odora*, in addition to the above characters, *S. aspericaulis* differs in the oblong, obtuse or at least not acuminate, instead of longer, lanceolate leaves, and the wholly glabrous, instead of ciliate involucral scales. From *S. Chapmanii*, whose leaves are similar in shape but slightly less oblong or elliptic, the new species further differs in not having the blunt prolonged midrib, and in its glabrous, instead of minutely pubescent and ciliate involucral scales. From *S. tortifolia* it is distinguished by its leaves all being essentially

[1] In some specimens the anise scent is wanting, but the odor does not seem to change its quality.

entire, its bristly, instead of merely scabrous puberulent stems, and the generally acute involucral scales, not rounded at tip, nor erose. From *S. fistulosa* it differs in the entire, instead of crenate-serrate leaves, not distinctly divided into upper and lower cauline, whereas *S. fistulosa* shows a pronounced gradation in the leaves from base to summit. *S. aspericaulis* finds its nearest relative probably in *S. Chapmanii*, although it is abundantly distinct from it.

SOLIDAGO TORTIFOLIA Ell. Sketch Bot. S.-C & Ga. ii, 377 (1824).

S. odora Michx.? Fl. Bor.-Am. ii, 118 (1803), not Ait.

SOLIDAGO FISTULOSA Mill. Gard. Dict. ed. 8, no. 19 (1768).

S. pilosa Walt. Fl. Car. 207 (1788). This is usually referred here, but the description is very meagre.

WASHINGTON, D. C.

IS ARENARIA LATERIFLORA DIOECIOUS?

WILHELM SUKSDORF.

MR. R. W. WOODWARD'S paper, On Variation in *Arenaria lateriflora*, in RHODORA for December, 1913, was very interesting to me, since I had made almost exactly the same observations on the related species *Arenaria* (or *Moehringia*) *macrophylla* about ten years ago. However, my conclusions were somewhat different, for I began to look upon the two forms as the two sexes of a dioecious species. The form with long stamens and short pistil does not produce seeds, at least not in many cases, and its petals are more conspicuous than in the other form, which has a longer pistil and short, apparently imperfect stamens. Many specimens of both forms were collected in 1904 and later distributed under one number (4033) but with separate labels, and the sex was indicated on the label in each case. My collection of this plant consists of 17, or if the sexes are kept separate, of 20 sheets, collected at nearly as many different places north and west of Bingen, Washington, scattered over an area about 30 miles wide each way, the altitude varying from 125 to 3000 feet or more. Of the 20 specimens 7 are pistillate and 13 are staminate, only one of the latter has a conspicuous ovary which, however, may be sterile.

My collection of *M. lateriflora* comprises only 5 numbers as follows: 1 from Cambridge, Massachusetts and 1 from Iowa, both with long stamens, and 3 from Spokane Co., Washington, one of these is pistillate, the other two consist of both sexes on different stems. In one long-stamened flower there is a capsule not very small, but it seems to be seedless.— To me it seems fairly certain that these two species are dioecious or nearly so. There may be a third form having long stamens and also producing seeds, but that is still doubtful. Further observations at many different places may perhaps be needed to settle this point.

BINGEN, WASHINGTON.

A CUT-LEAVED ALDER.— On the edge of a wet thicket at Norris Arm, at the mouth of the Exploits River in Newfoundland, there occurs a large clump of the common swamp Alder, *Alnus incana* (L.) Moench, with the leaves deeply pinnatifid. When the plant was first examined it was taken to be the shrub known in cultivation as *A. incana*, var. *pinnatifida* Wahlenb., but closer study shows that it cannot be placed with var. *pinnatifida*, for that shrub, known in the wild state only in Sweden, has the leaves densely pubescent beneath (see Callier in Schneider, Handb. der Laubholzk. i. 136). The Newfoundland shrub is clearly an extreme of the common American *A. incana*, var. *glauca* Ait., differing, like var. *glauca*, from typical *A. incana* of Europe, in having the leaves very glaucous beneath and quickly glabrate except on the veins. It should be called

ALNUS INCANA (L.) Moench, var. GLAUCA Ait., forma **tomophylla**, n. f., foliis elongatis irregulariter laciniato-pinnatifidis.— Leaves elongate, irregularly laciniate-pinnatifid.— NEWFOUNDLAND: border of a wet thicket, Norris Arm, August 21, 1911, *Fernald & Wiegand*, no. 5303 (TYPE in herb. Gray). A somewhat similar but less characteristic specimen from MAINE: Hartford, August, 1892, *J. C. Parlin*.— M. L. FERNALD, Gray Herbarium.

Vol. 16, no. 182, including pages 21 to 44 and plates 107 and 108, was issued 2 February, 1914.

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